ABSTRACT OF THE DISCLOSURE

An automatic steering control system comprises a behavior detector, a pattern matching section and a control parameter setter. The behavior detector sequentially determines a time duration of each of specific kinds of behaviors of a ship based on heading data detected by a heading sensor. The pattern matching section sequentially determines a behavior pattern which each of the behaviors of the ship matches from among multiple behavior patterns based on the heading data detected by the heading sensor during the time duration of each of the behaviors sequentially determined by the behavior detector. The control parameter setter sequentially reads out control parameters stored in a memory in correlation with the behavior pattern which each of the behaviors of the ship matches as determined by the pattern matching section and controls the ship based on the control parameters read out of the memory.